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Addison's Disease - The Great Pretender

Addison's Disease (hypoadrenocorticism) is often referred to as The Great Pretender. It is caused by a lack of natural steroid production by the body. This includes steroids that fall into the category of glucocorticoids (cortisol) and mineralocorticoids (aldosterone). The disease is caused by the destruction of part of the adrenal glands. The adrenal glands are found at one end of each kidney and they produce the natural steroids such as cortisol that most people are familiar with. When something damages the adrenal glands and the body is unable to produce these steroids then disastrous consequences can happen.

Mineralocorticoid deficiency results in the body being unable to properly regulate potassium and sodium levels. The result is an increase in potassium and a decrease in sodium. The sodium deficiency results in decreased circulating blood volume and can lead to kidney failure. Decreased potassium can cause weakness, decreased activity, and lack of appetite. Eventual heart damage can occur. Glucocorticoid deficiency can cause vomiting, lack of appetite, diarrhea, weight loss, and lowered blood glucose (sugar) levels.

As you can see by the vague symptoms listed The Great Pretender is a very appropriate name for Addison's Disease. It can manifest as a dog simply not seeming themselves or not eating as well as usual or having any number of other vague signs of not feeling well.

Sometimes Addison's disease can be suspected in a dog if bloodwork shows an increased potassium level along with a decreased sodium level. But not all dogs with Addison's disease have such altered levels. For this reason, a more critical test can be performed to determine if the dog has Addison's Disease. This test is called an ACTH Stimulation Test. With this test a blood sample is drawn and then an injection of a synthetic hormone is given to the dog. Later more blood samples are taken. Typically, dogs with Addison's Disease have little or no cortisol in their blood. ACTH is like a messenger that tells the adrenal glands to produce cortisol. In a normal dog the cortisol levels in the blood will increase after ACTH is given. In a dog with Addison's disease the level will usually be no different or only slightly elevated compared with the earlier blood sample taken.

A dog can have Addison's disease for weeks or months and only seem just "not right". The danger comes when an Addisonian crisis hits. This can be triggered by a stressful change in the dog's routine such as a move to a different house, a new baby arriving, etc. And an Addisonian crisis can be deadly. If the dog has no natural steroids then the dog is unable to deal with the stress appropriately. The altered potassium and sodium levels can cause dramatic heart problems and an emergency then occurs. Minutes can make the difference between life and death. There are probably many dogs that die suddenly at home due to an Addisonian crisis in a dog that was never diagnosed with Addison's disease.

The good news is that Addison's disease can be diagnosed and treated. Treatment generally involves inexpensive pills that are taken at home to replace the glucocorticoid deficiency as well as injections that are usually given once monthly to replace the mineralocorticoid deficiency. Dogs with Addison's disease can live perfectly normal lives if diagnosed and monitored properly. The key is diagnosing early.